

# Perspectives on U.S. Energy Regulation and Policy

~~The World Has~~  
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*Changed!*

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Worldwide Energy Conference  
September 28, 2004

# Status of U.S. Electric Policy

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- **Changing supply / delivery picture**
  - Overbuilt generation / inadequate transmission in some regions
  - Concern over supply, price and quality for natural gas
  - Greater scrutiny over market behavior
  - Mandatory and enforceable reliability standards contemplated
  - More reliance on renewable resources, demand response and efficiency
- **Markets look different - blend of competition and regulation**
  - 17 states and District of Columbia with retail competition
- **Federal Energy Regulatory Commission getting strong political push-back in approach to wholesale markets**
  - Twenty Senators raised concerns about FERC actions in individual cases
  - Reliability and market power FERC's chief concerns

# Status of U.S. Electric Policy

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- **Strong regional disagreements re wholesale competition**
  - **SE, West**
    - Strongly oppose FERC's SMD and Federal intrusion into planning, siting and resource adequacy
  - **NE, Mid-Atlantic, Mid-West**
    - Favor wholesale competition and Regional Transmission Organizations (RTOs)
- **State PUCs seeking deference to their views on:**
  - Native load priority
  - Resource planning, acquisition and adequacy
  - Pricing of transmission expansion
  - Allocation of costs of existing transmission
  - Rates for bundled retail transactions
  - Reliability

# Status of U.S. Electric Policy

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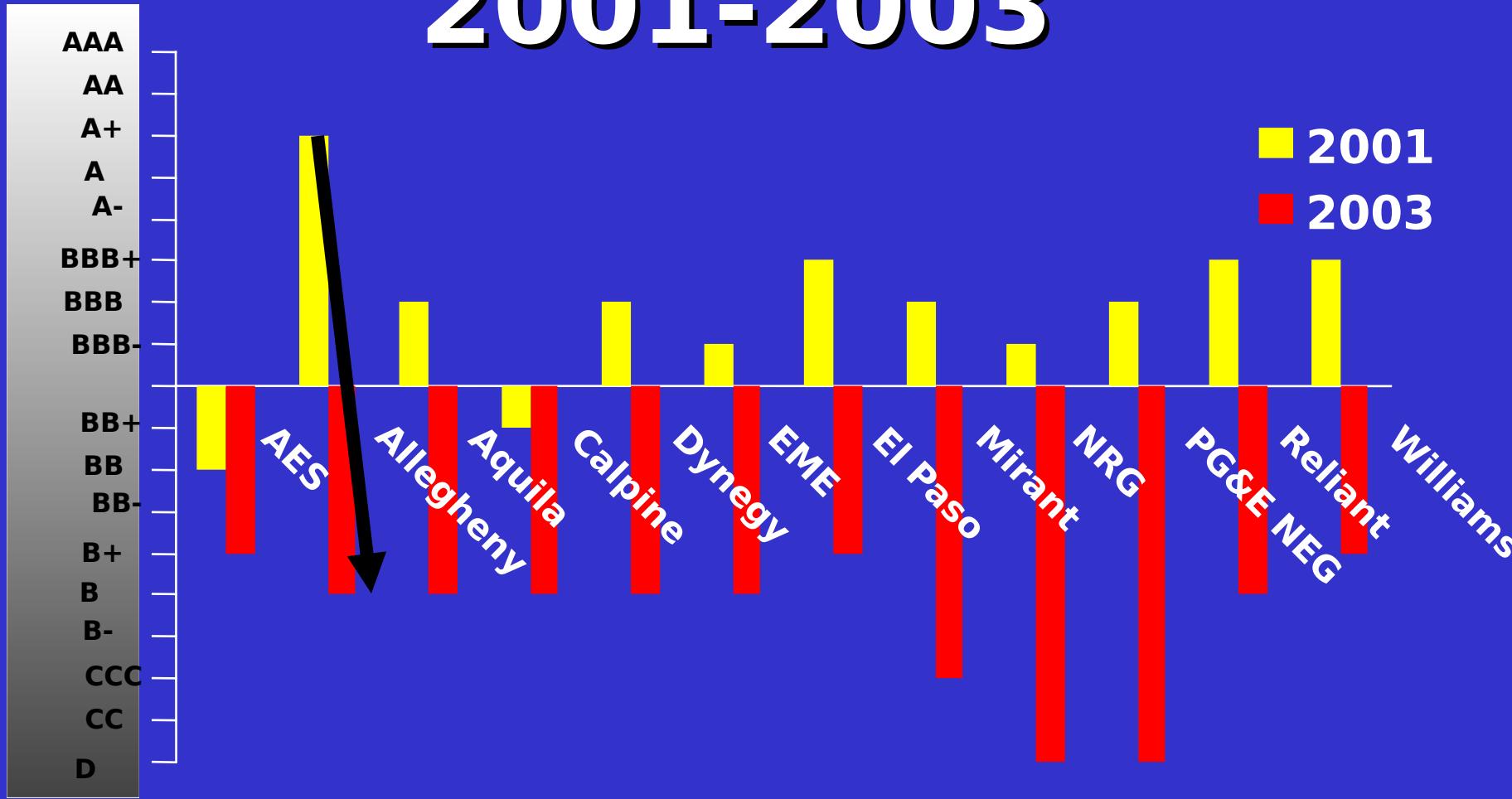
- **Congress seeking to adopt comprehensive energy legislation**
  - Controversy looms
  
- **Wall Street's continuing concerns about investor confidence**
  - Bankruptcies and collapse of merchant power and energy trading sectors
  - Wholesale market development – stuck in transition
  - Federal / state conflicts
  - Wall Street is demanding greater certainty to support infrastructure investment

# The World Has Changed!

*There Is A Lot  
Of*



# Merchant Energy Credit Collapse 2001-2003



Source: Standard & Poors, November 2003



# Uncertainty = Risk

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60+% of Proposed Plants Ha

**“ABN AMRO estimates that about  
60,000 MW of capacity is **for sale** in the  
U.S. equivalent to 120 power plants”**

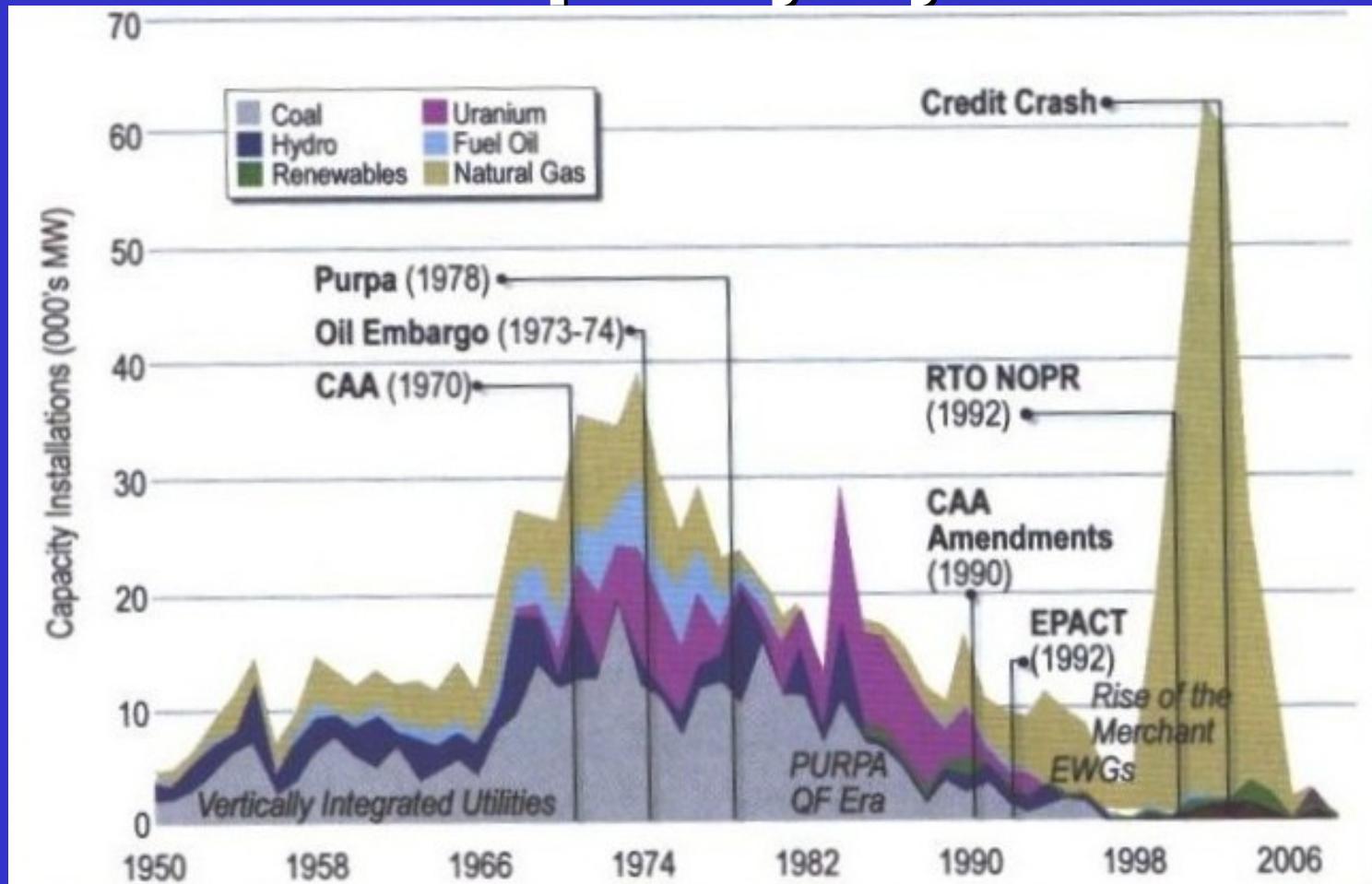
Source: Wall Street Journal

2/9/04

*Uncertainties about pace, details  
and future of energy market reform*

# Generation Options Affected By Public Policy

## New Generation Capacity By Fuel Since 1950



Source: Henwood Energy Consulting

# Challenges with Each Option

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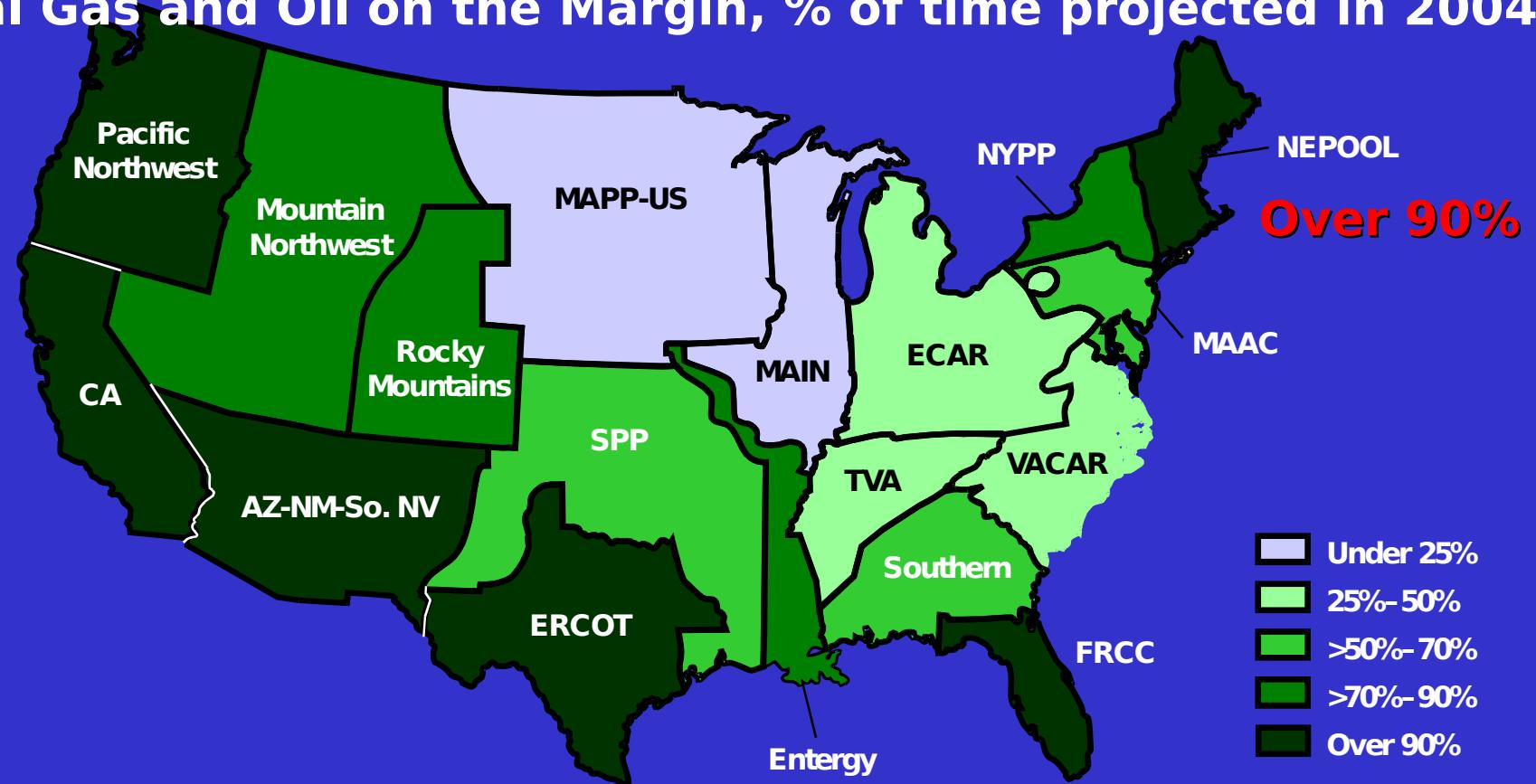
- **Coal** – Certainty on environmental rules / policies, transportation, land use
- **Nuclear** – Relicensing, waste storage, decommissioning
- **Gas** – Infrastructure enhancement, supply, price, quality
- **Hydroelectric** – Relicensing streamlining, fish mitigation
- **Renewables / new technologies** – Funding, integration into grid
- **Purchase power** – imputed as debt on balance sheets
- **Diverse resource portfolio**

**The World Has  
Changed!**

***Natural Gas  
Crisis?***

# Natural Gas Has Grown in Importance for Power Generation

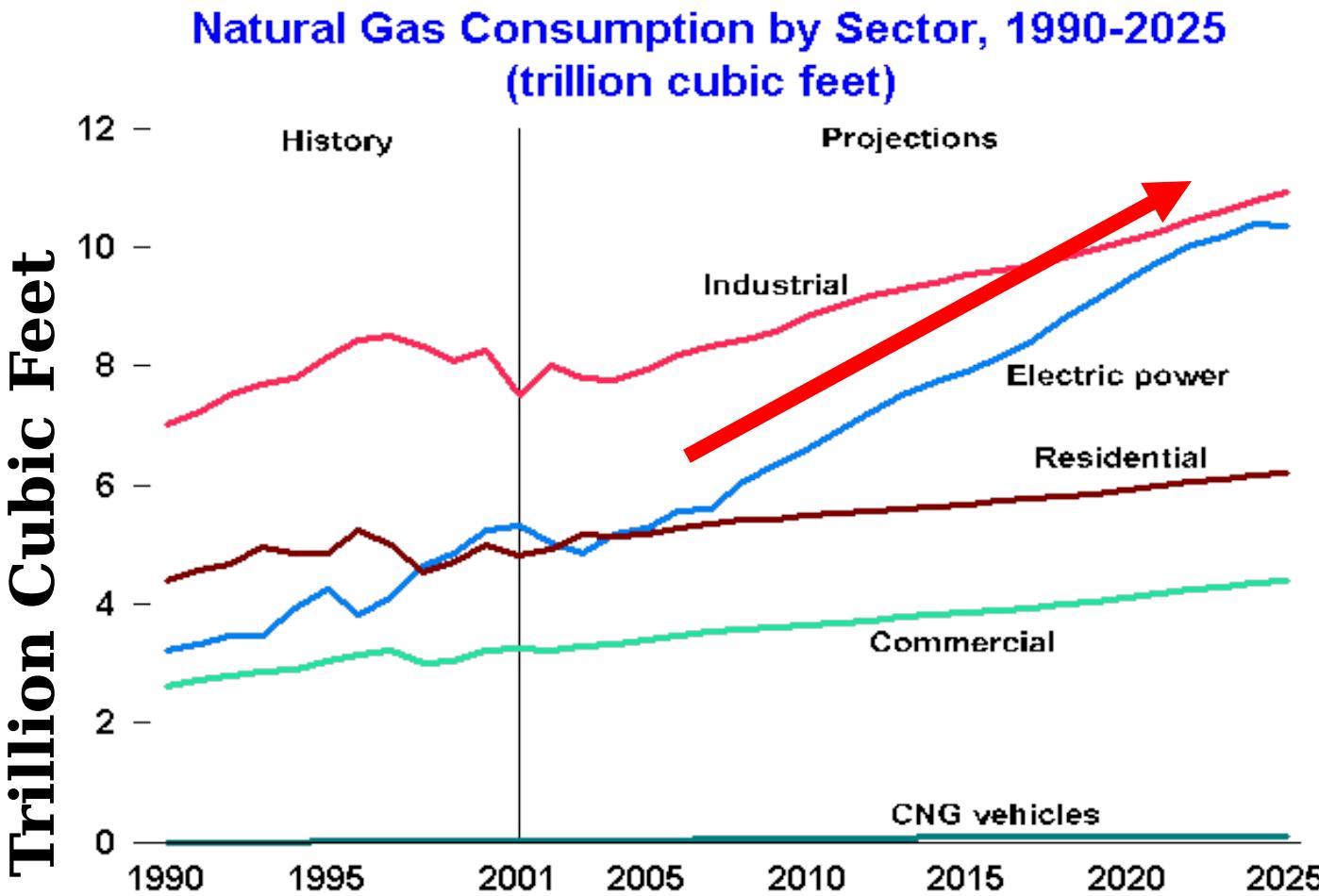
Natural Gas and Oil on the Margin, % of time projected in 2004\*



\*Source: Cambridge Energy Research Associates

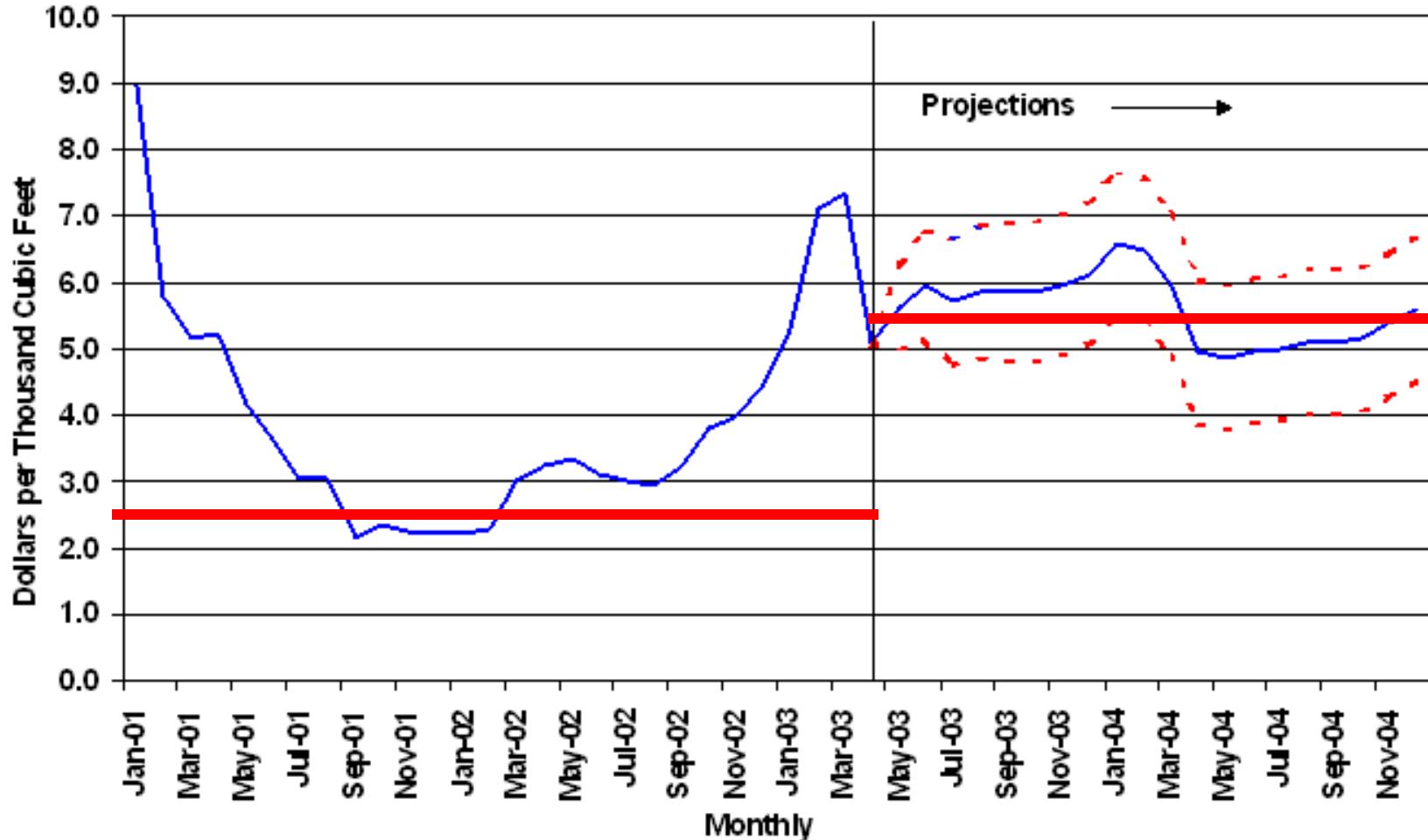


# Natural Gas Consumption by Sector 1990-2025



# Gas Prices Have Skyrocketed

Natural Spot Price (Base Case and 95% Confidence Range\*)



Source: Testimony of Guy F. Caruso, Administrator, Energy Information Administration  
House Committee on Energy and Commerce on Natural Gas Supply and  
Demand Issues on 6/10/03



**If there is a shortage...**

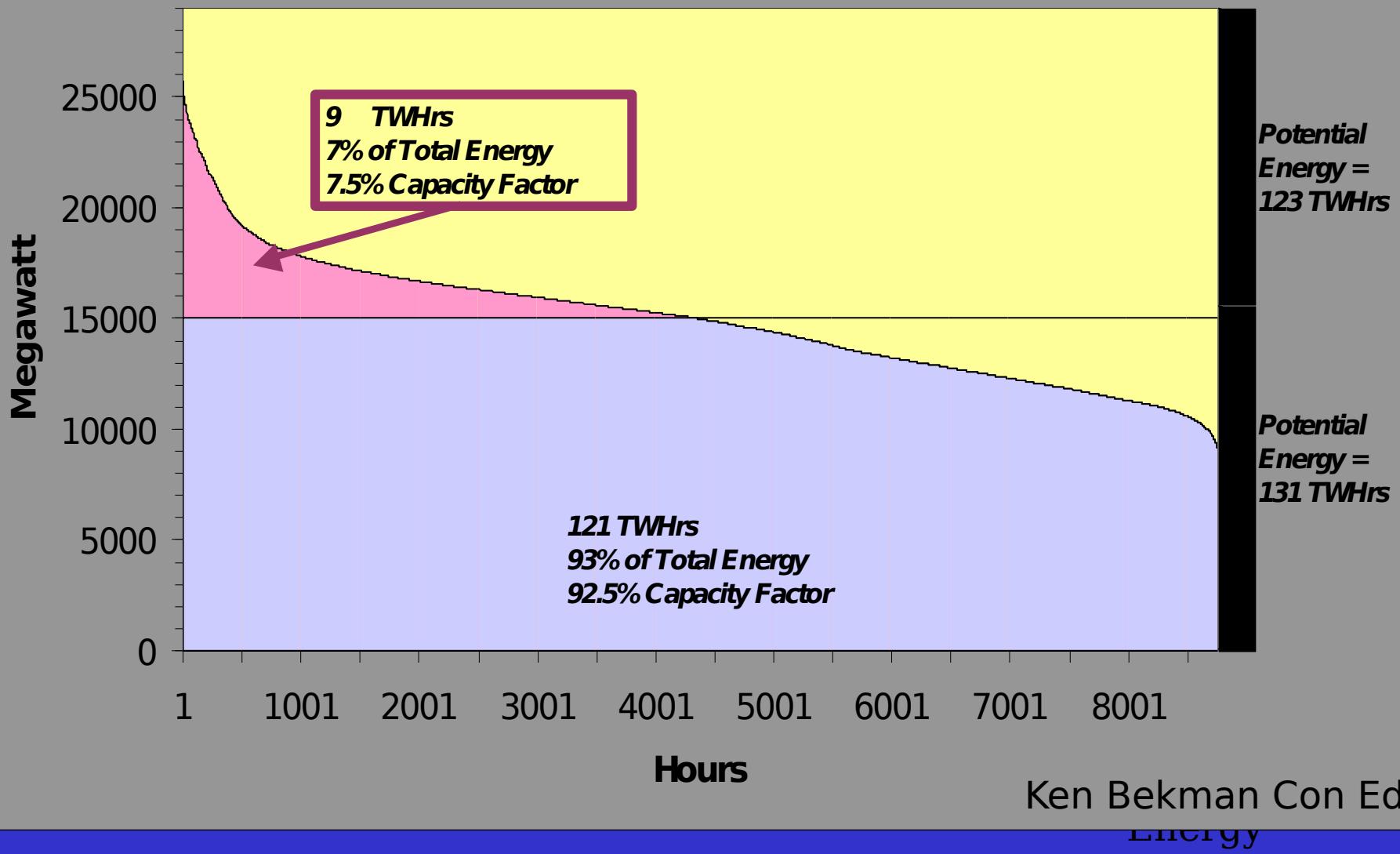
***Who gets it?***

***What will it cost?***

***Or is the problem  
market design?***

***Who will build?***

# New England 2002 Load Duration Curve



**Can the market design put iron in**

**The World Has  
Changed!**

***What About  
Coal?***

# Unaware

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- **Many Americans are not aware - or don't believe - that air quality has improved**
  - **68 percent believe that air quality in the U.S. is WORSE now than it was 30 years ago**
  - **54 percent say that air quality in the U.S. will WORSEN in the future**

# Just the Facts

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- Electric power SO<sub>2</sub>, NO<sub>x</sub> and mercury cut 40 percent
- Air quality improved per EPA's annual reports
- New rules or Clear Skies will reduce electric SO<sub>2</sub>, NO<sub>x</sub> and mercury another two-thirds
- More than 90 percent cut in SO<sub>2</sub>, NO<sub>x</sub> and mercury per ton of coal burned or KW electricity generated
- Power plants will continue to reduce emissions and air quality will continue to improve

# Changed!

## *The Delivery System*



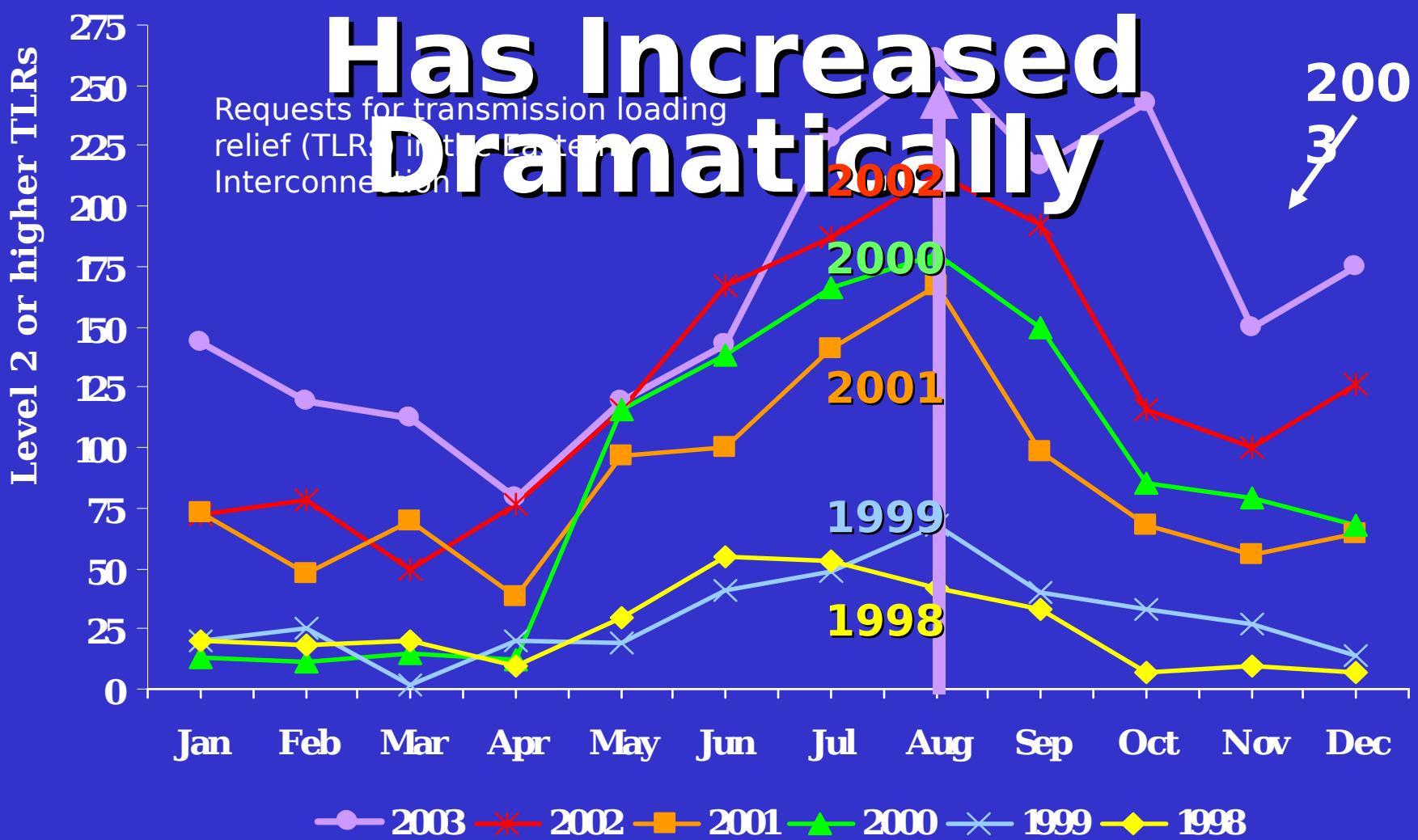
*Industry structure  
affects expansion  
and planning*

# Transmission Investments



Note: Data represents Shareholder-owned electric utilities.

# Congestion on Transmission Lines Has Increased Dramatically



Source: NERC Transmission Loading Relief Procedure Logs

# **Siting (NIMBY) Remains Huge Challenge**

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- **Building new facilities is one of most significant hurdles for reliability**
- **Requires years of painstaking consultation**
- **Siting approval is elusive**
  - 50 state, 50+ rules (local, county, Indian and Federal lands, etc.)
  - Network does not respect geographic boundaries
  - Siting may be required for “thru” states that see no benefits
  - Access across Federal lands very complicated
- **Potential role for Regional State Committees**
- **Need comprehensive energy legislation**

# Blackout of 2003

Single largest blackout ever in U.S.

61,800 MW lost

100+ power plants affected

50 million customers impacted

# Causes of the Blackout

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Tools

Trees

Training

# **Status of Reliability Actions - Tools**

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- **Readiness audits of control areas / reliability coordinators (26 done)**
- **Program to track implementation of Blackout recommendations**
- **Transparency**
  - Disclosure and Reporting Task force created
  - Violations of NERC standards and audit results made public
- **Standards**
  - NERC to revise standards by end of 2004
  - Enforceable standards in-place when legislation passes
- **Independence**
  - Funding / FERC staff task force to propose alternative funding
  - Regional reliability councils

# Status of Reliability Actions - ~~Training and Trees~~

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## ■ Training

- 5 days operations training per year and system emergency drills
- FERC issues RFP / NERC working with FERC

## ■ Trees

- Vegetation Management surveys completed by NERC and FERC
- Vegetation standards evolving
  - Relying extensively on Western Electric Coordinating Council (WECC) practices
- FERC to work with States
- FERC to issue report to Congress

# Making Choices: Conflicting Goals?

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Protecting the Environment  
Meeting Native Load Requirements

~~or and~~

Promoting Competition?

# **Electricity - Who's In Charge?**

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- FERC and States both claim authority over interstate transmission for retail services
- FERC has no power to site facilities necessary for wholesale markets to thrive
- FERC to “defer” to regional state committees - Issues? How much?
  - RSC are not decisional entities, states have explicit authority over planning and resource adequacy decisions
- Mandatory and enforceable rules are proposed in energy legislation, which would give FERC new authorities in this area
  - Roles of RTOs and Reliability Councils on reliability will have to be defined

# Reintegration - Return to Ownership?

- **Some advocate utility ownership of generation (some never left)**
  - Resolves credit issues, if regulatory compact is strong
  - Hedges against boom-bust cycles and wholesale market performance
- **But**
  - Need to recognize states' statutory responsibilities
  - Need to address FERC's concern over undermining wholesale power market development
  - Need upfront agreement re prudence and cost recovery
- **Possible to achieve rateability without plant ownership?  
Need clear regulatory guidelines for when utilities should “build versus buy”**

# **Competitive Procurement Issues**

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## **■ Fair Process**

- Clear, fair, unbiased, and approved by the State

## **■ Transparent**

- Products clearly defined, e.g., quantity, quality, time, price, and non-price factors

## **• Non-price requirements important**

- May include fuel diversity, supplier diversity, reliability, creditworthiness of the supplier and impacts on utility creditworthiness, contract length, cost and certainty of delivery, economic development or other factors established by the State

## **■ Preserve all options**

- Nothing should limit State and utilities ability to meet req'ts through building or acquiring generation, transmission, demand response and efficiency



# **Competitive Procurement Issues**

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## **■ Utility cost recovery**

- All costs need to be compensated, including financing costs and risks due to longer term contracts, stranded costs created by changes in regulation, etc.

## **■ Flexibility**

- No one method should be nationally or regionally imposed

## **■ Resolve jurisdictional issues**

- Use of competitive procurement is a State responsibility
- FERC actions should be coordinated with States
- New issues -- Independent 3<sup>rd</sup> party administrator or deference to state?

**Independence - Is a state commission**

# Changed!

A graphic featuring the American flag's stars and stripes in the background. Superimposed on the center is a grayscale silhouette of the United States Capitol building, showing its dome and the columns of the House and Senate wings.

**U.S.**  
*Congressional*  
**Challenge**

# **Energy Bill - Infrastructure Issues**

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- **Electric reliability organization - FERC enforced mandatory standards**
- **Transmission - Accelerated tax depreciation, FERC backstop**
- **Supply**
  - Promote natural gas supply and clean coal technologies
  - Streamline hydro relicensing and preserve nuclear option
  - Extend renewable tax credits
- **Corporate flexibility / market development / consumer protection**
  - Repeal PUHCA, Reform PURPA

# The World Has Changed!

*Can We  
Finance Needed  
Infrastructure?*



# The New Risks

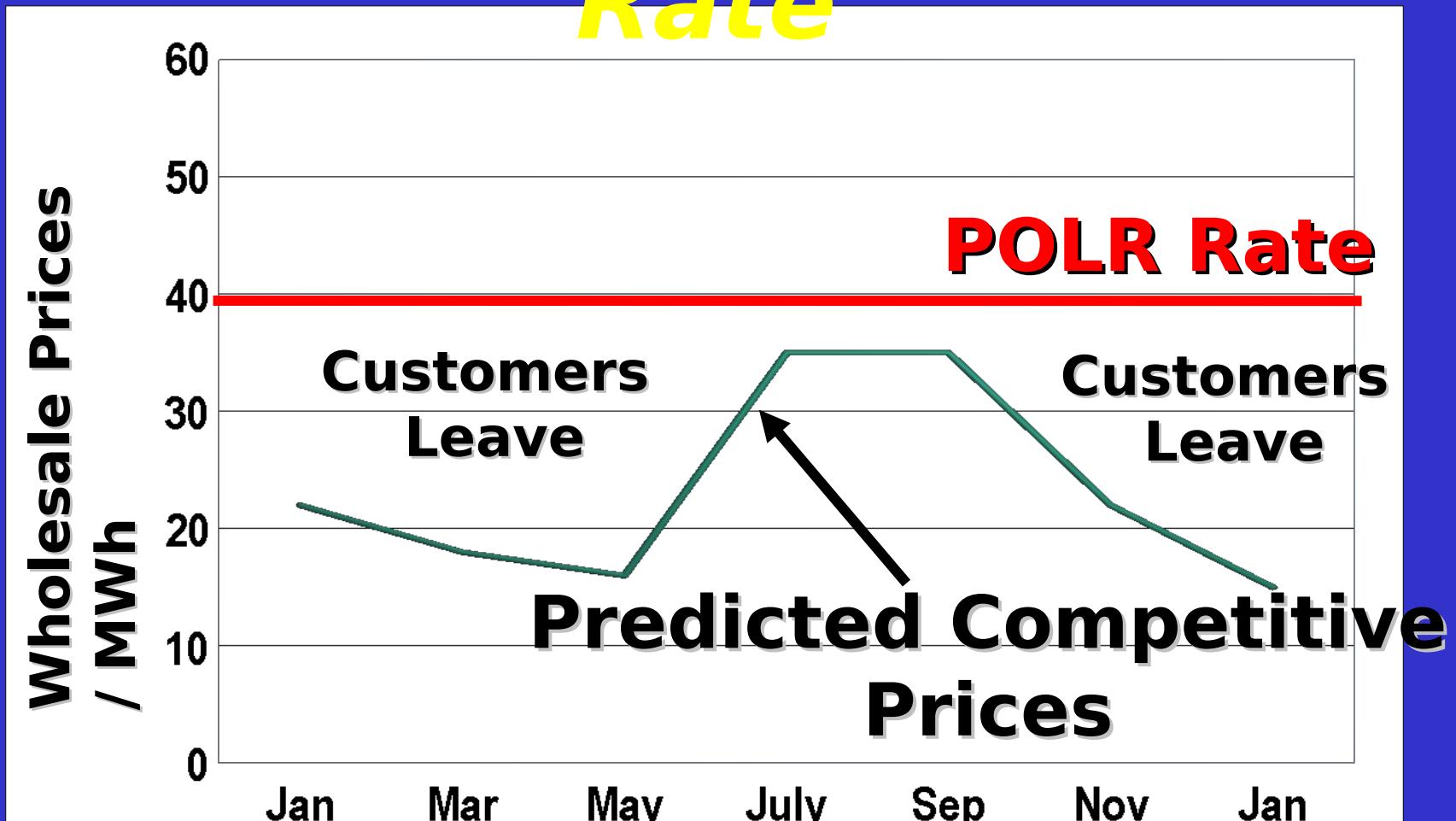
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- **Provider of last resort**
- **Competitive wholesale markets**
- **Infrastructure replacement - New rate base w/o new customers**
- **Reduced ability to absorb cost increases or revenue decreases**
- **Tension between federal and state rules and regulations**
- **Legislative uncertainty**
- **Deferred / stranded cost balances and recovery thereof**
- **Cost escalation in price capped environment**
- **Investment community perception**



# *Market Would Beat POLR*

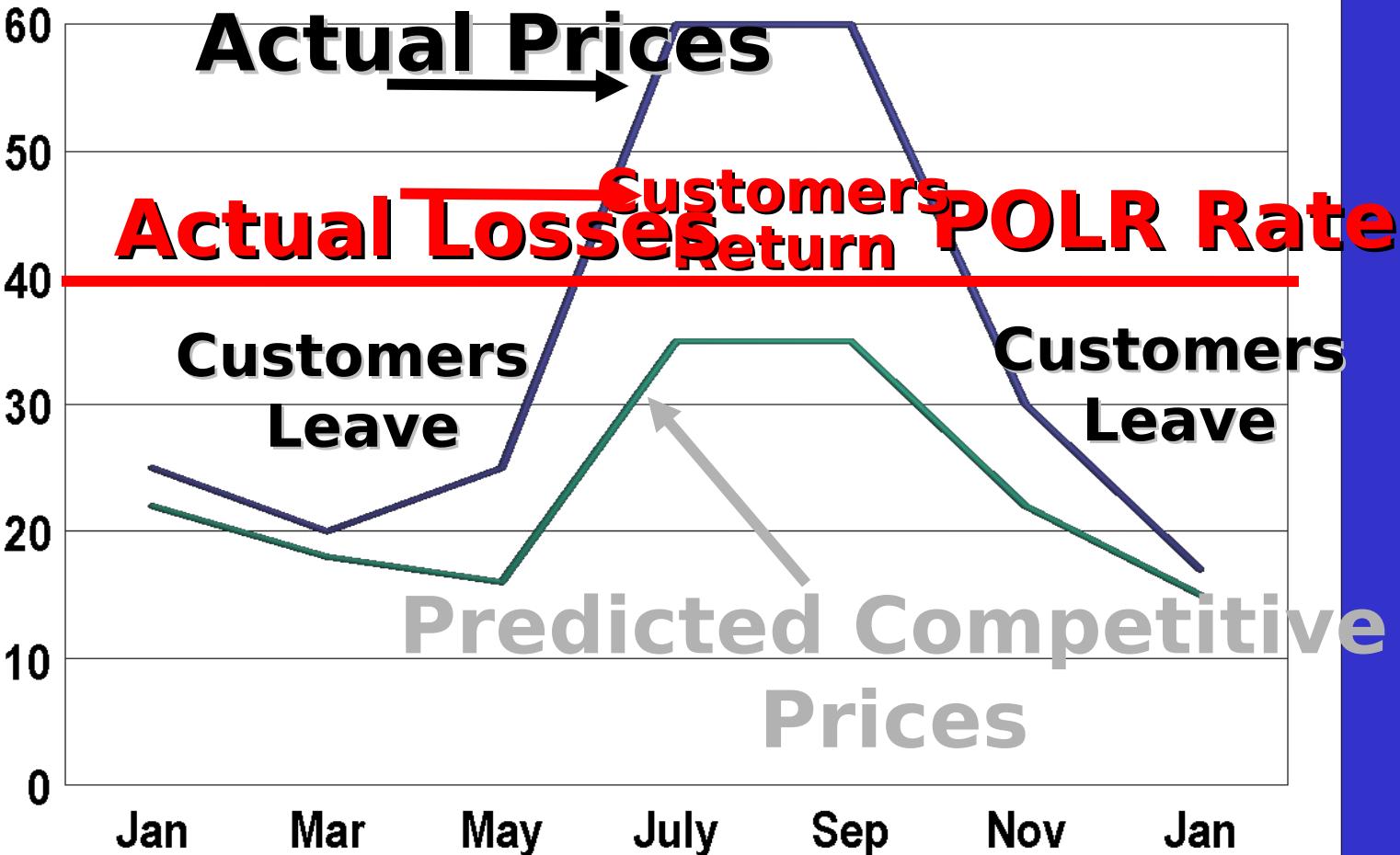
*Rate*



# *Customer Predictions:*

## *Customers Come Back At*

~~Peak Times~~



# The World Has Changed!

*The Future -  
A New Approach  
to the  
Regulatory  
Compact!*



# State Regulation - New Rate Cases

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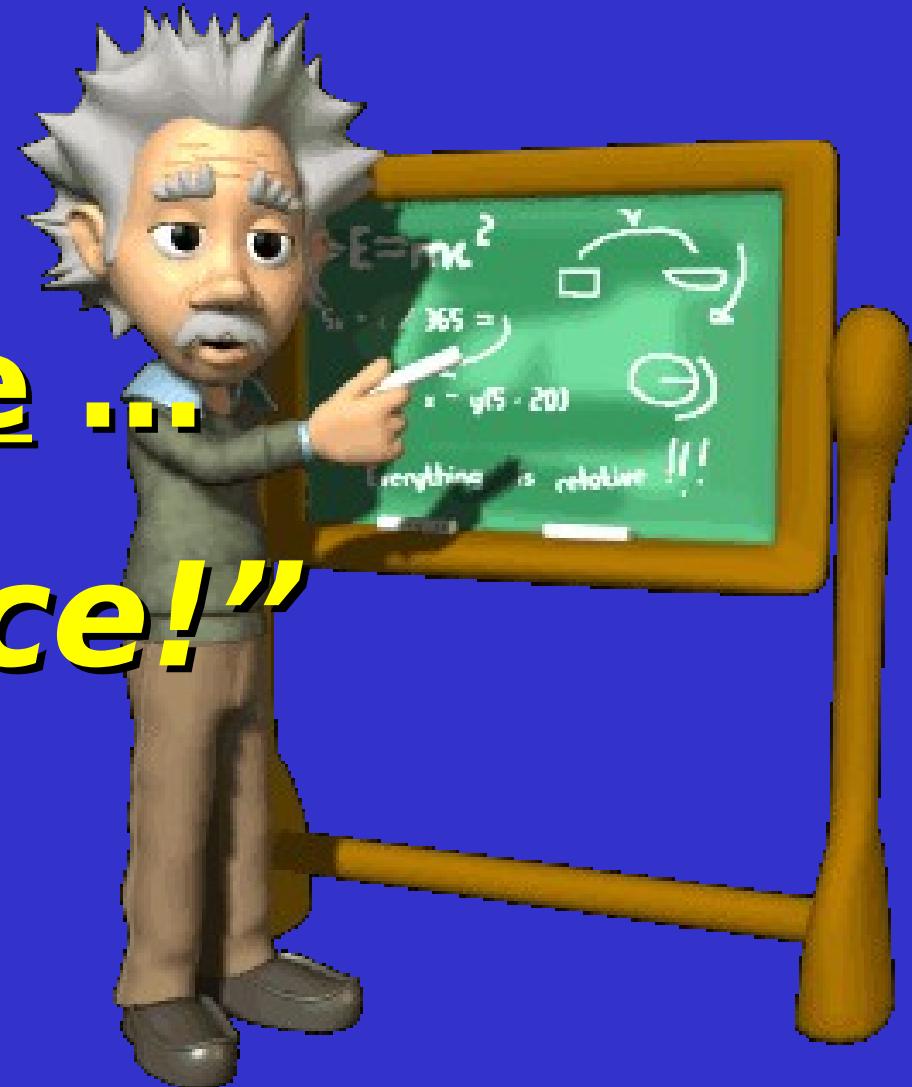
- **Stuck in a transition?**
  - Unnatural blend of competition and regulation
  - Utilities saddled with risk of failed competitors and markets
- **Rate caps ending - rate cases starting**
  - Entirely new environment - market and corporate structures, policies
  - New investments needed - 9/11, blackout, G, T & D, RTOs, ISOs, RSCs
  - Traditional cost of capital tools might not work
  - Public policies may not reflect current needs or desired outcomes
  - Billions of dollars in pending rate cases
  - No longer a declining cost industry

# Retail Markets - A New Approach

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- **Fix Provider of Last Resort obligations**
  - Reduce tension between obligation to serve and customer switching rights
- **Agree on planning horizons and goals**
  - Risk management
  - Financial viability
  - Supply reliability
  - Procurement transparency
- **Move from prudence to compliance**
  - Establish *a priori* standards and metrics for measuring performance
- **Revise the approach over time as market changes**

**Well, maybe  
some parts are ...  
*rocket Science!"***



# ~~What Should we Have Learned About Providing Low Cost Reliable Energy?~~

**Markets don't follow the "promises"**      Real markets can be volatile and more expensive

**Supply and demand really are related!**      Can we keep them in balance?

**Electric markets are closely tied to financial markets**

Can we finance the next round of investments?

**Good market design is critical!**

Can we harmonize FERC / States /Congressional Agendas?



# Summary

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## ■ **Restore investor confidence**

- Ensure access to capital on reasonable terms for infrastructure enhancements

## ■ **Clarify rules for competitive market development**

- Must provide the flexibility and incentives needed to ensure a strong and reliable system that benefits consumers and recognizes regional differences

## ■ **Adopt a comprehensive energy policy**

- Provide the right incentives to grow the electricity system and provide a clear direction for the future